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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,145	08/25/2003	Richard Harvey	063170.6608	3233
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BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980			EXAMINER LEWIS, ALICIA M	
			ART UNIT 2164	PAPER NUMBER
			NOTIFICATION DATE 02/03/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/648,145

Applicant(s)

HARVEY ET AL.

Examiner

ALICIA M. LEWIS

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2010 and 21 September 2010
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is responsive to communication filed August 2, 2010 and the pre-appeal conference decision mailed November 17, 2010. The claim amendments/remarks filed August 2, 2010 are being entered and considered. Claims 10 and 12 are currently amended and claims 4, 8, 9 and 11 are cancelled. Claims 1-3, 5-7, 10 and 12-20 remain pending in this application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3, 5-7, 10 and 12-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Claims 1 and 5 both include the limitation of using a processor to remove the repeating attribute from the at least one directory parent object such that the at least one directory parent object comprises only unique attributes. However, this limitation is not described in the specification. More specifically, the specification does not describe a step or process of removing a repeating attribute. The specification describes representing unique fields as attributes and repeating elements as child objects (Figure

15 and paragraphs 146 and 221 of the PG-PUB 2004/0205084), but does not actually describe the step of removing the repeating attributes to represent them as child objects. As far as removing, the specification only appears to support removing a portion of a hierarchy having a one-to-one relationship in order to flatten the hierarchy (paragraph 34 of the PG-PUB 2004/0205084); this is not the same as removing repeating attributes, and in fact is the opposite because flattening removes objects, while removing repeating attributes appears to expand or add to the hierarchy by creating child objects.

4. Claims 1 and 5 also recite using a processor to create a first directory child object for storing a first value associated with the repeating attribute. However, the specification also fails to describe this creating step. The specification only describes representing repeating elements as child objects (paragraph 229-230 of the PG-PUB 2004/0205084), but does not actually support the step of creating the child objects. Similarly, the specification fails to support creating a second directory child object as recited in claims 2 and 6.

5. Therefore, the specification fails to describe the limitations removing the repeating attribute from the at least one directory parent object such that the at least one directory parent object comprises only unique attributes and creating a first (and second) directory child object for storing a first value associated with the repeating attribute. As such, this claimed limitation fails to comply with the written description requirement. Claims 2, 3, 6, 7, 10 and 12-20 are rejected as being dependent upon rejected base claims 1 and 5.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5-7, 10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (hereinafter 'AAPA') in view of Lee et al. (US 2002/0169788 A1) ('Lee').

With respect to claims 1 and 5, AAPA teaches a computer-implemented method for use in a web services system having complex UDDI object(s) (Figs. 2 and 13, page 1 lines 13-15, page 2 lines 25-32, page 3 lines 9-19), the method comprising:

providing a database (page 2, lines 14-15) for storing at least one directory parent object (*i.e. business entity object*) (page 4 lines 14-17 *teaches UDDI objects may be directory objects*) within a first object class (page 2 lines 25-29), the at least one directory parent object storing a plurality of attributes (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27), wherein the at least one directory parent object stores at least one unique attribute (*i.e. authorized name and business key*) that occurs only once in the at least one directory parent object and a repeating attribute (*i.e. name*) that occurs more than once in the at least one directory parent object (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27);

a directory child object (page 2 lines 25--29);
a directory object for storing a first value associated with the repeating attribute (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27); and
storing, in the database, the value associated with the repeating attribute in the directory object (Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27).

AAPA does not teach using a processor in communication with the database to create a first child object for storing a first value associated with the repeating attributes, the first child object also within the first object class; using the processor to remove the repeating attribute from the at least one parent object such that the at least one parent object comprises only unique attributes; or storing, in the database, the value associated with the repeating attribute in the first child object.

Lee teaches a system and method for automatic loading of an XML document defined by a document-type definition into a relational database including the generation of a relational schema (see abstract), in which he teaches: using a processor in communication with the database to create a first child object for storing a first value associated with the repeating attributes, the first child object also within the first object class (paragraphs 114 and 198);

using the processor to remove the repeating attribute from the at least one parent object such that the at least one parent object comprises only unique attributes (paragraphs 197-198); and

storing, in the database, the value associated with the repeating attribute in the first child object (paragraph 198).

Lee teaches that an item represents an object and that an attribute is a property of an item. He further teaches repeating (i.e. multiple value) attributes. For example, Lee teaches an item (object) E has a multiple-value (repeating) attribute A, and further that a new item (child object) E.A may be created for each A. The item (object) E has a one-to-many relationship with the new item E.A, and thus the new item E.A represents a child object of the item (object) E. Lee, further teaches that multiple-value (repeating) attribute A is removed from attributes of item (object) E, and thus the item (object) E has only unique attributes.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified AAPA by the teaching of Lee to enable multiple-value attributes to be represents as sets by converting multiple-value attributes into separate table (or objects) in order to access those values (Lee, paragraphs 197-198).

With respect to claims 2 and 6, AAPA in view Lee teaches using the processor to create a second directory child object for storing a second value associated with the repeating attribute, the second child object also within the first object class (Lee, paragraphs 197-198). *(Lee teaches that for each attribute, an item (object) E.A is created.)*

With respect to claims 3 and 7, AAPA in view Lee teaches wherein the parent object is at least one of a business entity, business service, binding template and tmodel (AAPA, Figs. 13 and 14, page 2 lines 25-29, page 3 lines 1 - 19).

With respect to claims 10 and 12, AAPA in view of Lee teaches wherein the first child object is a relationship object (Lee, paragraphs 197-198).

With respect to claims 13 and 17, AAPA in view of Lee teaches further comprising creating a searchable index of the first value associated with the repeating attribute (Lee, paragraphs 37, 76 and 197-198). *(Lee teaches creating an index, and further creating separate tables for accessing multiple-value attributes.)*

With respect to claims 14 and 18, AAPA in view of Lee teaches storing at least one unique attribute in the directory parent object (AAPA, Figs. 13 and 14, page 3 lines 1 - 19).

With respect to claims 15 and 19, AAPA in view of Lee teaches wherein the directory parent object comprises a business entity and the at least one unique attribute comprises a business key (AAPA, Figs. 13 and 14, page 3 lines 1 - 19, page 4 lines 21-27).

With respect to claims 16 and 20, AAPA in view of Lee teaches wherein the first directory child object is selected from the group consisting of name, description, contact, discovery URL, keyed references and business services (AAPA, Figs. 13 and 14, page 3 lines 1 – 19, page 4 lines 21-27, page 2 lines 25-29).

Response to Arguments

8. Applicant's arguments with respect to claims 1-3, 5-7, 10 and 12-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALICIA M. LEWIS whose telephone number is (571)272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia M Lewis/
Examiner, Art Unit 2164
January 28, 2011